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United States Department of the Interior

GEOLOGICAL SURVEY
EROS Data Center
Sioux Falls, South Dakota 57198

IN REPLY REFER TO: OC 4-5

April 5, 1985

Memorandum

To: Director
Associate Director

Through: Chief, National Mapping Division

From: Chief, EROS Data Center

Subject: Briefing material re: Landsat commercialization

Attached is the briefing material used by Dave Stockman in briefing the Senate Committee staff on his feelings on Landsat commercialization. The next step is not clear, but NOAA and EOSAT have some hope that lobbying the Hill will convince the Administration to approve the current EOSAT proposal. If this fails, NOAA will probably take a preliminary position that no better proposals are forthcoming, and that they will accomplish nothing by re-advertising. Whether Congress goes along with this depends upon how much other possible industry bidders lobby.

I will keep you informed if anything further develops.

Allen H. Watkins

Attachment

AHWatkins/mle/4-4-85/x123

cc: R. Watts
L. Pettinger
G. Metz
G. Bailey

AHW Subj
AHW Chron
EDC Chron

LANDSAT COMMERCIALIZATION SUBSIDIES

- LANDSAT IS A 13-YEAR OLD RESEARCH AND DEVELOPMENT PROGRAM THAT CAN'T ACHIEVE COMMERCIALIZATION LIFT-OFF WITHOUT CONTINUED DEEP FEDERAL SUBSIDIES.

  - LANDSAT system developed and operated as R&D system by NASA 1972-1979 -- 3 satellites launched.

  - In 1979 Carter Administration deemed system operational and transferred commercialization responsibility to the Department of Commerce (NOAA).

  - LANDSAT 4 (launched in 1982) marked second generation of satellite and was provided with a new high resolution sensor called Thematic Mapper. LANDSAT 5 (launched in 1984) also carries this technology.

  - With each of the 5 satellites the U.S. Government has procured, launched and operated since 1972, program advocates predicted increased data sales (as high as $25 million annually) to the private sector and new uses by Federal agencies, but sales and use have remained insignificant (average less than $12M/year).

  - Current system costs $300M per satellite to build and $40 million a year to operate. Lasts three years.

o ADMINISTRATION NOT AGAINST COMMERCIALIZATION, BUT PROPOSALS TO DATE ARE REALLY INTENDED TO MAINTAIN A GOVERNMENT FUNDED SYSTEM.

. In 1981, Reagan Administration resolved to cease Government funding for LANDSAT and encourage true commercialization - via at risk private investment and takeover. Later, however, DOC maintained that some level of subsidies would be required to get the private sector to take over land remote sensing.

. Faced with zero market interest in unsubsidized commercialization, last summer the President agreed to limited additional Federal funding of $250 million in return for the development, manufacture, launch and operation of two satellites that would provide six years of service.

. Following President's decision, EOSAT produced a contract in September 1984 that guaranteed only one satellite. Thus, the contract resulted in little other than EOSAT replacing GE as a Government LANDSAT manufacturer. NOAA also requested an $80 million sensor development program in addition to the subsidy limit.

. The initial contract has now been renegotiated (March 1985) and it comes much closer to the limitation the President specified, but it still falls short because:

  - it calls for an additional $36 million (to $286 million) subsidy;

  - it allows EOSAT to receive the subsidy without risking any of its own funds; and

  - it allows EOSAT to withdraw unilaterally from the contract if it can't make 60% of its revenue estimates. Consequently, the U.S. taxpayer is likely to be asked to provide increased subsidies.

. Past experience with LANDSAT commercialization and NOAA satellite programs indicates that cost estimates change. The only certainty is that they always increase.

o CASH FLOW REQUIREMENTS FOR PROFITABLE LANDSAT COMMERCIALIZATION FAR EXCEED LIKELY MARKET.

. The now pending EOSAT (a consortium of RCA and Hughes) proposal is premised on substantial growth over current data sales/use.

EOSAT REVENUE REQUIREMENTS VS. CURRENT MARKET
($ in millions)

	1985*	1986	1987	1988	1989	1990	1991	1992	1993	1994	Total
EOSAT Sales Estimates	14	26	17	9	52	56	62	69	70	75	450
Minimum EOSAT Requirement (60%)..	9	17	11	6	31	34	37	41	42	45	273
Likely market/current revenues (inflated)	11	15	15	16	17	18	18	19	19	20	168
Additional Subsidy Required											
Minimum	0	2	0	0	14	16	19	22	23	25	121
Potential	0	11	2	0	35	38	44	50	51	55	286

*Nine months

. Potential additional subsidy (almost $300 million) could occur if revenues don't grow and EOSAT demands that subsidies make up shortfall between its original estimates and actual revenues.

- LACK OF VIABLE MARKET.

  . No significant Federal market: Agencies have little use for LANDSAT data.

    - No use of data by Commerce/NOAA.

    - Total Federal data purchases are estimated at $8 million in the 1985 Budget, but only $5 million is firm.

    - USDA decided to discontinue data purchases because other crop estimation methods were significantly more cost effective, e.g., infrared images from weather satellites.

    - All agencies were surveyed in RFP process. None would commit to data purchases.

  . Insignificant private market. LANDSAT subsidizes special industries at general taxpayers' expense.

    - Oil and gas industry and crop forecasting firms are the major beneficiaries.

    - Total non-Federal revenues from LANDSAT were only $6 million in 1984. System doesn't even recover a fraction of its operating cost.

  . U.S. has archived reams of data.

    - When LANDSAT 5 ceases operation in 1987 there will be 600,000 scenes on file, including over three years of the thematic mapper sensor data. For renewable resources (oil, gas, minerals) the earth doesn't change, and existing data files should meet needs adequately.

  . U.S. Allies will Fly Land Sensing Satellites.

    - The French and Japanese will be flying subsidized land remote sensing satellites in the next few years. Let's let them subsidize us for a change. Let them build another SST.

  . The U.S. continues to maintain its technology leadership role through basic R&D in NASA.

    - From 1985-89 the NASA Budget contains $130 million for land remote sensing R&D. The U.S. doesn't need to maintain an operational system to keep up new R&D.

o CONCLUSION

. We are at a decision point. We can:

- Accept the current contract which requires a $75 million 1985 supplemental and $90 million in 1986 with the remaining $121 million (for a total of $286 million) proposed in 1987 and 1988.

- Recompete the RFP (Commerce will oppose this because they claim NOAA will not get a better bid);

- Get out of the LANDSAT business.

. Recommend getting out of the business. Land remote sensing is not an inherent or important Federal responsibility. If there is a market, RCA, Hughes, GE, or whomever should be able to develop it without Federal subsidies.

Reagan Budget Office Opposes Transfer Of U.S. Satellite Business to Two Firms

By Arlen J. Large
Staff Reporter of The Wall Street Journal

WASHINGTON—A plan for transferring the government's Landsat earth-picture satellite business to a private operator is opposed by the White House budget office.

The decision by Budget Director David Stockman would, if it holds, end a long struggle to take over the Landsat system by the Earth Observation Satellite Co., or Eosat, a partnership formed by RCA Corp. and Hughes Aircraft Co.

If the transfer falls through, it also reduces chances there will be any U.S. replacement for the lone fully operational Landsat satellite currently in orbit. This satellite is designed to work until March 1987, though government operators say it actually could last longer. The space camera's demise would end the more-or-less continuous flow of earth images that have been coming from a series of Landsat satellites since 1972.

Market for French-Based Firm

The Commerce Department has been selling Landsat pictures to crop forecasters, oil prospectors, mining companies, forest managers and state and foreign governments. The end of the Landsat system would leave a clear market for pictures from a French-based company, Spot Image, which plans to launch a rival satellite next October.

Success of the Landsat transfer to Eosat hinges on a government subsidy to assist the transition, but Mr. Stockman is balking at the exact terms. He passed word to a group of Senate Republicans last week that no subsidy will be forthcoming. The Commerce Department-approved contract with Eosat, said Mr. Stockman's briefing memorandum, "still falls short."

According to the memo, Mr. Stockman complained that the contract doesn't require Eosat to put up enough of its own money at the outset, and allows the company to back out of the transaction too easily if its earth-picture sales prove disappointing. The budget director expressed doubt that a "viable" market would develop for the pictures.

Under the proposed contract, Eosat would start selling Landsat pictures from the government's library, and take over operation of the existing satellite until it dies. Most of the $250 million subsidy would be used by the government to build and launch a replacement satellite on Eosat's behalf. The private company would have to bear the cost of replacements after that.

Commerce Department officials and Eosat said they haven't had any formal word of the contract's rejection. "Nothing official has been done yet," said Charles Williams, Eosat's president. "As far as we're concerned we still have a proposal under review. If anything is going on behind the scenes, it's being done at the personal level."

Reagan Earlier Endorsed Idea

The Commerce Department may still try to get Mr. Stockman's decision overturned by President Reagan. Two years ago, Mr. Reagan himself endorsed the idea of a private takeover of not only the Landsat earth-imaging system, but the government's weather satellites as well.

Congress has outlawed any disposal of the weather satellites, but last year it approved a law allowing the Landsat system's transfer to private operation. Mr. Stockman's rejection of the contract negotiated within the terms of that law drew criticism from one of the act's main authors, Rep. James Scheuer (D., N.Y.). "Stockman should have killed the proposal two years ago if he was inclined to do so," said Rep. Scheuer. "They're sounding the death knell for what could have been an important domestic technological industry."